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ABSTRACT

The decline of the American railroad is explored to gain a better understanding of the nature and consequences of decline, as well as to assess implications for higher education. The following issues are addressed: changes that occurred in the railroad's environment between the early twentieth century and the present; the kind of adaptation that railroads made to this environmental change; and inferences that can be drawn for higher education as it enters an era of decline. There are several important similarities between the past environment of the railroads and the anticipated environment of higher education. Each industry has lost or will likely lose a significant share of its market over a period of years. A second similarity is the effect of extensive government regulation upon the regulated industry. A third similarity is that previously negotiated railroad labor contracts severely limited management flexibility at precisely the time when more flexibility was needed. There are analogies to tenure and to departmental prerogatives at a time when significant shifting of resources is required. However, higher education has the option of reducing its resource commitment, achieving equilibrium between resources and enrollment at a lower level, and continuing its educational function at a contracted scale of operation. (SW)

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DECLINE: A CASE STUDY OF THE RAILROADS AND ITS IMPLICATIONS FOR HIGHER EDUCATION

by

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A paper presented at the 1983 Conference of the Association for the Study of Higher Education

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> The old railroad yard is a tangle of weeds, twisted track, seemingly derelict cars, an eyesore in a landscape dominated by crowded, encircling highways. The depot, even in big cities, has been demolished, or it is a lonely echoing chamber where only one or two lights burn, a place to make the occasional visitor feel like a trespasser into the past. . . . There is a generation now that has never ridden a train. (Jensen, 1975, p. 282)

This paper is a case study of the decline of the American Railroad. It explores an instance of historical decline in order to gain a better understanding of the nature and consequences of decline, as well as to assess its relationship to higher education. Three questions are addressed:

1. What changes occurred in the railroad's environment between the early twentieth century and the present?
2. What kind of adaptation did the railroads make to this environmental change?
3. What inferences, if any, can be drawn for higher education as it enters an era of decline?

Environmental Changes

The year 1916 is generally considered the end of the "golden age" of the railroads (Stover, 1961). In that peak year, there were 254,000 miles of railroad line in service. Between 1916 and 1968, 45,000 miles of railroad service were abandoned, in comparison to the continuous growth in the era before 1916. Other major indications of decline during the last 50 years are as follows (Stover, 1970):

> In the 20 year period from 1948 to 1968, noncommuter rail travel dropped by more than 2/3, from 35 billion passenger miles to under 10 billion.
>
> Twenty-five years ago a fat 42-page timetable showed 14 different Pennsylvania trains scheduled for New York to Chicago. The 1968 timetable consists of a single large folded sheet, revealing only four trains to serve the route.
>
> By the mid-1970s, the nationally celebrated luxury trains of the past--The Phoebe Snow, the Nellie Bly, the San Francisco Zephyr, the Twentieth Century Limited--had all been removed from service.

Whatever indicator is used--track mileage, passenger rail service, freight service, financial strength--the railroads had declined from a dominant national industry in 1916 to a crippled, debt-ridden, heavily subsidized national problem in the 1960s and 1970s. What environmental factors accounted for such a dramatic reversal of fortune in such a relatively short period of time?

The most important factor, almost self-evidently, was the development of other means of transportation which diverted much of the railway's original market away from it. The automobile accounted in 1967 for 937 billion intercity passenger-miles, 60 times the volume of railroad passenger traffic; in 1916, the railroad had by far been the dominant mode. Besides the automobile, competition from bus lines and then airplanes has diverted passenger traffic away from the railroads. The speed, convenience, and extensability of these new modes of transportation could not be matched by the rails. At the same time, trucking, inland water freight, and pipelines have made substantial inroads into freight traffic formerly transported by the rails. Above and beyond major new forms of competition, the nation's railroads have been adversely affected by three other environmental

factors: (a) extensive regulation by the Interstate Commerce Commission making it extremely difficult to alter existing rate structures; (b) federal subsidy of highway and airport construction, providing advantages to the competition; (c) high tax burdens, especially created by local property taxes on fixed and immovable assets. These enviromental changes--major competitive advantages enjoyed by faster and more flexible forms of competition, as well as governmental policies which regulated and fully taxed the railroads while subsidizing its competition--all contributed to the decline of the railroad from its near monopoly position in transportation in 1916. That these kinds of changes would be experienced as serious and substantial threats in any industry, there can be no doubt. The intriguing question is how, in particular, did the railroad management respond to this precipitous crisis? What kind of adaptations were made to these dislocating environmental conditions?

Adaptations to Decline

In studying the response of the railroad's management to environmental decline, Levinson's (1972) model of adaptive activities, contained in his work entitled Organizational Diagnosis, will be highly useful. Bringing a psychological perspective to his study of organizations, Levinson distinguishes between two kinds of response to environmental pressure.

> Activities devoted to mastering the internal and external worlds may be seen as coping behaviors, or mechanisms. Those directed toward protecting the organisms against internal or external threat may be seen as defense mechanisms. (p. 539, underlining mine)

While Levinson's listing of coping behaviors and defense mechanisms

was created to help diagnose the condition of an individual organization, it will nevertheless provide a highly valuable roadmap for charting the response of an entire industry, such as the railroads.

Levinson indicates the organizational activities associated with each of four successively worsening orders (stages) of organizational decline. In the first order response, ("exaggerations of normal adaptive activities"), Levinson identifies several characteristics that can be seen immediately as accurately describing the railroad's response to decline. An important first order response is "undermining of organizational caring." Stover (1970), who is generally sympathetic to the railroads, admits that a "callous railroad management indifferent to the needs of the traveling public" is one of the many causes of the "sad state of railroad passenger traffic" (p. 223). The legacy of the "public be damned" attitude, for which railroad management was notorious, exacted a high toll in the quality of passenger service. Stover continues,

> The travelling public was convinced that most railroad managers were no longer interested in passenger traffic. . . . Passenger traffic was associated with dirty care, indifferent train service, surly ticket agents, and the discontinuance of money-saving round trip tickets. (p. 232)

An additional "first-order response" which plagued the railroads was "denial which shuts out information or pretends the threat does not really exist; refusal to recognize threat; minimize threat" (Levinson, 1972, p. 541). From the vantage point of its monopolistic position in 1916, railroad promoter Charles Henry discounted the threat of automobile competition. "The fad feature of automobile will gradually wear off, and the time will soon be here when a very

large part of the people will cease to think of automobile rides" (Stover, 1970, p. 132). His statement reflected a prevailing attitude among the railroad men.

> The railroads thought it a preposterous notion that a few self-propelled contraptions on the streets of pre-war America could ever become a serious threat to their long held monopoly of transportation. (Stover, 1970, p. 133)

Even with evidence to the contrary mounting, this kind of attitude continued for three more decades. This kind of response exemplifies what Levinson calls a lack of "reality orientation"--the inability to perceive and judge the world around it.

As the situation further deteriorates, the organization is confronted with problems which it cannot solve. Earlier "first-order responses," ("sporadic efforts: abortive, often short-lived and inappropriate") are followed by more chronic and serious "second-order responses" ("repetitive unimplemented discussions and planning"). Several of the railroad's problems were potentially tractable, and yet railroad leadership was unable to successfully resolve them. These problems were: (a) a rigid, unyielding and externally determined rate structure; (b) a high cost labor contract including work rules unchanged since 1919; (c) a public perception of poor and indifferent passenger service; and (d) intrarailroad inefficiencies such as redundancies in terminals, trackage, and purchasing and repair procedures. In their ineffectual attempts to wrestle with these four problems, the railroads exhibited second order

> maladaptive and disruptive activities which have a high cost in terms of money, stress for individuals, and organizational survival potential. Usually they suggest a need for different or better leadership. (Levinson, 1972, p. 542)

The railroads did ultimately make some major advances in technology and service during the 20th century--development of diesel locomotion; more efficient freight service through better freight handling, tracking, switching, radio communications, and "piggyback service"; streamlined and faster passenger train service. These were, in Levinson's typology, the railroads' "normal adaptive activities," but it was a case of too little, too late. The railroads continued to descend the scale to "third order activities" ("extreme behavior--panic, catastrophic demoralization, apathy, resignation"), and finally "fourth order activities" which "result in the demise of the organization or the involuntary surrender of control to another organization (e.g., forced merger, bankruptcy)" (p. 543). The merger of the Penn-Central, the bankruptcy of many other railroads, the assumption of passenger service by federally controlled Amtrak, are indicative of an industry in the final stage of its demise.

In tracing the devolution of an organization (or industry), Levinson concludes, "the more an organism devotes its energies to defensive behavior, the less it has available for effective and enduring mastery" (p. 540). The railroads were a clear case in point. The more the railroads were overtaken by the demonstrated advantages of their competitors, the less able they were to obtain flexibility in ICC rate structure, bargain successfully with the unions over work rules, restore a tarnished public image, or initiate industry-wide efficiencies through voluntary merger or consolidation. It will never be known whether, under different leadership, a more positive solution to these vexing problems was historically possible, or, indeed, if possible, whether it would have permitted a more successful

adjustment to decline. What is known is that the railroads continued to make dysfunctional adaptations to environmental stress, sliding, in Levinson's terms, from slightly maladaptive activities (first-order) to self-destructive activities (fourth-order). To summarize, in Boulding's (1975) words, the railroads "adjusted very badly and exhibited the trauma of decline in almost classical form--regulation, rigidity, and loss of their best management personnel to expanding industries" (p. 9).

Implications for Higher Education

There are several important similarities between the past environment of the railroads and the anticipated environment of higher education. The first and most obvious similarity is that each industry has lost or will likely lose a significant share of its market over a period of years. A second similarity is the effect of extensive government regulation upon the regulated industry. For the railroads, regulation inhibited autonomous action of the part of railroad management, moving the locus of control away from those best able to directly affect the course of events. For higher education, what is the reciprocal relation between regulation and decline? Will decline lead from state coordination to state control? Will additional regulation, in turn, accelerate and deepen the anticipated decline? Will Federal Financial Aid regulations play a more dominant role in the affairs of each single institution and the entire industry? At a more general level, does the vulnerability associated with decline invite governmental regulation which then contributes to future decline?

A third similarity is that previously negotiated railroad labor contracts severly limited management flexibility at precisely the time when more flexibility was needed. There are analogies to tenure and to departmental prerogatives at a time when significant shifting of resources is required.

The similarities notwithstanding, there is a crucial difference in the nature of the market decline. Higher education is not, in the main, facing new and superior forms of competition potentially threatening its hegemony (a qualitative problem); rather, it is facing a declining market base in response to demographic trends of the next twenty years (a quantitative problem). Therefore, higher education has the option, as the railroads did not, of reducing its resource commitment, achieving equilibrium between resources and enrollment at a lower level, and continuing its educational function at a contracted scale of operation.

The final question is to what extent an industry entering decline will follow the stages of Levinson's model, slipping from "slightly maladaptive activities to catastrophic demoralization and demise." Believing the car and then the airplane would go away, the one thing the railroad leadership did not do was to face its problems. College and university presidents, as survey after survey reveal, display an unfounded optimism that their institutions will be spared the baneful consequences of decline, a decline which they recognize will affect everyone else (e.g. Breneman, 1982). Is it possible that this crucial ingredient of "reality orientation"--

the ability to perceive and judge the world around it--will determine the success or failure of an institution or industry in adapting to conditions of external decline?

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